CLAIMS

1. A device comprising:

an assembly apparatus;

a programmable logic device mounted to said assembly apparatus and comprising (i) a plurality of logic block clusters and (ii) a plurality of routing channels configured to interconnect said logic block clusters; and

a die mounted to said assembly apparatus and comprising a first communication channel (i) configured to convert between a first serial data signal and a first parallel data signal and (ii) coupled to a first of said routing channels to exchange said first parallel data signal with at least one of said logic block clusters.

2. The device according to claim 1, wherein (i) said die further comprises a second communication channel configured to convert between a second serial data signal and a second parallel data signal and (ii) coupled to a second of said routing channels to exchange said second parallel data signal with at least one of said logic block clusters.

3. The device according to claim 2, wherein (i) said die further comprises a third communication channel configured to convert between a third serial data signal and a third parallel data signal and (ii) coupled to a third of said routing channels to exchange said third parallel data signal with at least one of said logic block clusters.

4. The device according to claim 3, wherein (i) said die further comprises a fourth communication channel configured to convert between a fourth serial data signal and a fourth parallel data signal and (ii) coupled to a fourth of said routing channels to exchange said fourth parallel data signal with at least one of said logic block clusters.

5. The device according to claim 1, wherein said die further comprises a second communication channel (i) configured to convert between a second serial data signal and a second parallel data signal and (ii) coupled to said first routing channel to exchange said second parallel data signal with at least one of said logic block clusters.

6. The device according to claim 1, wherein said first communication channel is further coupled to said first routing channel to receive a control signal from one of said logic block clusters.

7. The device according to claim 6, wherein said control signal is configured as one of (i) a portion of said first parallel signal and (ii) an encoding selection signal.

8. The device according to claim 1, wherein said first communication channel is further coupled to said first routing channel to present a status signal to at least one of said logic block clusters.

9. The device according to claim 8, wherein said status signal is configured as one of (i) a portion of said first parallel signal and (ii) a special character indicator.

10. The device according to claim 8, wherein said die further comprises a second communication channel (i) configured to convert between a second serial data signal and a second parallel

data signal and (ii) coupled to said first routing channel to receive said second parallel data signal and a control signal from one of said logic block clusters.

11. A method of fabricating a device comprising the steps of:

(A) mounting a programmable logic device to an assembly apparatus, wherein said programmable logic device comprises (i) a plurality of logic block clusters and (ii) a plurality of routing channels configured to interconnect said logic block clusters;

(B) mounting a die to said assembly apparatus, wherein said die comprises a first communication channel configured to convert between a first serial data signal and a first parallel data signal; and

(C) coupling said first communication channel to said first routing channel to exchange said first parallel data signal between at least one of said logic block clusters and said first communication channel.

12. The method according to claim 11, further comprising the step of coupling a second communication channel of said die to

a second of said routing channels to exchange a second parallel data signal between at least one of said logic block clusters and said second communication channel.

13. The method according to claim 12, further comprising the step of coupling a third communication channel of said die to a third of said routing channels to exchange a third parallel data signal between at least one of said logic block clusters and said third communication channel.

14. The method according to claim 13, further comprising the step of coupling a fourth communication channel of said die to a fourth of said routing channels to exchange a fourth parallel data signal between at least one of said logic block clusters and said fourth communication channel.

15. The method according to claim 11, further comprising the step of coupling a second communication channel of said die to said first routing channel to exchange a second parallel data signal between at least one of said logic block clusters and said second communication channel.

16. The method according to claim 11, further comprising the step of coupling said first receive channel to said first routing channel to receive a control signal from one of said logic block clusters.

17. The method according to claim 11, further comprising the step of coupling said first receive channel to said first routing channel to present a status signal to at least one of said logic block clusters.

18. The method according to claim 17, further comprising the step of coupling a second receive channel of said die to said first routing channel to receive a control signal from one of said logic block clusters.

19. A circuit comprising:

means for mounting a first programmable die and a second die;

means for routing signals among a plurality of logic block clusters in said first programmable die;

means for converting between a first parallel data signal and a first serial data signal in said second die; and

means for coupling said means for converting to said means for routing to exchange said first parallel data signal between said means for converting and at least one of said logic block clusters.